Albert L. Rhoton, Jr., M.D., 1932–2016

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Early Years

Albert L. Rhoton, Jr. was born in the family home, a log cabin in Parvin, Kentucky, in the hills of Appalachia on November 18, 1932. He was delivered with the assistance of a midwife for the fee of one bag of corn. There was no other healthcare available in that region of Kentucky and once, when young Al was feared to have pneumonia, his father walked 20 miles to consult a physician who prescribed castor oil, as this was before antibiotics; fortunately, he made a full recovery. The home had no electricity and water had to be fetched from a nearby spring. The Rhoton children—Al, his brother, and sister—attended a two-room school house in the hills. Dr. Rhoton's parents understood the importance of education, and his mother and father traveled to attend Berea College to complete their secondary education. His father then attended the University of Kentucky, where he obtained a Master's degree in Chemistry. During this time, Al's mother taught in the local school house to support the family financially, even though she didn't have a formal degree. When Al was 10 years old, the family moved to Akron, Ohio, where his father was able to find employment as a chemist, and they became city dwellers. It was customary at that time that children from Appalachia were held back a grade when they entered the city school district, but Mrs. Rhoton would not allow it. Al Jr. promptly went on to fail the 5th grade which he then repeated and passed; in bemused retrospect, Dr. Rhoton once surmised he was the only neurosurgeon to fail the 5th grade and then go on to graduate at the top of his medical school class. Dr. Rhoton's father was fond of telling his son, "Every day you should go to work." Al's first job was as a paper boy, and he held several other after school jobs in Akron. In 2010, Dr. Rhoton once commented on how his father's philosophy must have stuck with him, because in 40 years at the University of Florida he only took one sick day—a day in when he underwent a procedure requiring general anesthesia.

College Years

Following high school graduation, Al Rhoton, Jr. moved to Columbus, Ohio to attend Ohio State University, with the plan

to get a chemistry degree, like his father. To support himself, he worked cleaning laboratories, washing dishes, and taking on an array of other menial tasks. One summer, he got a job working for The Boy's Club at a settlement house organizing activities and helping disadvantaged youth, and he found the experience transforming. He changed his major to social work, with the plan that he would dedicate his life to this type of work. During his last semester of college, before completing his degree, he took a class in physiologic psychology taught by Donald Meyer—a course that sparked a lifelong passion for studying the brain. That semester, he decided to become a neurosurgeon. He switched his major and enrolled in premed courses; classes that were significantly more difficult than offered in the social work curriculum. He flunked all his mid-terms that first semester. He realized he would have to work less and study more, which presented a significant financial burden, but with the help of friends and family he was able to buckle down, finish the prerequisites, and win acceptance to Ohio State Medical School. He also received an offer to interview at Washington University in St. Louis and hitchhiked to St. Louis, where he was offered a spot and started medical school at Wash U in 1955. It was during medical school that he met an occupational therapy student, Joyce Leah, and the two were married after a three-year courtship.

Internship and Residency

After graduating first in his class, Dr. Rhoton completed a one-year general surgery internship at Columbia Presbyterian Hospital in New York City, 1959–1960. Although this year was spent only doing general surgery rotations, he was keenly aware of the prestigious Neurologic Institute across the street, and made friends with many of the residents. He was granted an additional year in New York, during which he worked with the Institute's neurosurgeons and researchers, before returning to St. Louis to commence neurosurgical residency under the mentorship of Dr. Henry Schwartz at Barnes Hospital in 1962. He completed residency in 1965 and would later remark that he

never saw a vestibular schwannoma resected with preservation of the facial nerve, and never saw a pituitary tumor resected with functional preservation of the normal gland. Recall, this was before the availability of hormone replacement therapy, meaning those operations often resulted in significant postoperative morbidity or even death. Although driven to study neuroanatomy since his college days, it was during his final year of residency that Dr. Rhoton was able to truly embrace that pursuit, with a mind toward making his operations safer, gentler, and more accurate.

Early Career

Fortunately for Dr. Rhoton, the Mayo Clinic was looking to improve their training program by adding a neuroanatomy laboratory rotation to the residency, and offered him a position after he completed his residency (►Fig. 1). The Rhotons then moved to Rochester, Minnesota with their four young children—three of whom would go on to obtain Doctor of Medicine (M.D.) degrees, with the fourth completing registered nurse training. From 1966 to 1972, Dr. Rhoton honed his surgical skills by maintaining a very busy clinical practice, predominantly treating trigeminal neuralgia and intra and extra-axial brain tumors. He also began to study and report his findings from anatomical studies of the brain and temporal bone. However, the schedule of clinic one day followed by surgery the next; five or even six days a week left precious little time for research. In parallel, Dr. Rhoton felt increasingly compelled by a desire to do “medical mission work,” or serve an area without access to the high level of surgery he was seeing at Mayo, in short, he wanted to build something from scratch.

The opportunity arose in 1972 to accept the position of Chief of Neurosurgery at University of Florida in Gainesville. The small-town life of this north central Florida community appealed immensely to the Rhotons, who were also eager to

Fig. 1 Dr. Rhoton's staff photograph at the Mayo Clinic, 1966.

leave their snow shovels behind, and Dr. Rhoton joined Frank Garcia as a two-man division within the Department of Surgery. The modest resources afforded the two neurosurgeons included two secretaries and one operating room, where they could work 3 days a week. That first year they had two applicants for residency, including Arthur Day, M.D., who not only completed training in Gainesville, but went on to become a prominent member of their staff as a cerebrovascular neurosurgeon. Those early years demanded an extraordinary effort to provide the breadth of neurosurgical care to the central Florida community, yet Dr. Rhoton never abandoned his desire to build a neuroanatomy laboratory. The division had limited funding, to say the least, and the Dean had little resources to support them. However, Dr. Rhoton was able to identify a private donor who gave \$20,000 to support the laboratory. This sparked a desire to discover other donors to aid the research mission, which culminated in the Keene family donation of one million dollars.

Chairmanship

During his 26 years at the helm of Neurosurgery at the University of Florida, Dr. Rhoton realized incredible growth and accomplishments in the department. First of all, he moved neurosurgery from a division under general surgery to a department. By the time he handed over the reins to Dr. Friedman, Dr. Rhoton had accumulated roughly 20 million dollars in endowment funding, which helped support 11 endowed professorships in almost every subspecialty of neurosurgery. He encouraged his faculty to serve organized neurosurgery, and he proved an essential role model in that regard.

Over his career, Dr. Rhoton was a member of almost every neurosurgical and anatomical society, serving as President of The Congress of Neurological Surgeons, The Florida Neurosurgical Society, The American Association of Neurological Surgeons, The Society of Neurological Surgeons, and the North American Skull Base Society. In addition, he served other roles in all the major societies while ascending to their presidencies, and was on countless committees nationally, internationally, and at the University of Florida, serving as chairman of 48. He gave his time tirelessly to patient run advocacy groups such as the Trigeminal Neuralgia Association and the Acoustic Neuroma Association, and was visiting professor at 67 different institutions on five continents. None of this, of course, slowed his academic productivity, and Dr. Rhoton's curriculum vitae lists 508 publications. A compilation of his clinical and anatomic experience culminated in his text, “Cranial Anatomy and Surgical Approaches,” which has been translated into Portuguese and Chinese.

All of this, combined with the great notoriety he brought to his department and program, further resulted in his being named honorary member of almost all international neurosurgical societies, and receiving neurosurgery's highest awards. Included in this auspicious list is the Cushing Medal from the AANS, the Olivecrona Medal from the Swedish Neurosurgical Society, the Medal of Honor from the Neurosurgical Society of America, the Jamieson Medal from the

Neurosurgical Society of Australasia, the Medal of Honor from the World Federation of Neurosurgical Societies, and the Founders Laurel Award from the CNS, to name only a few.

Even more inspiring than his leadership and academic output was Dr. Rhoton's kind and caring manner with patients facing the awesome and frightening prospect of a neurosurgical procedure. Dr. Rhoton often emphasized that the best ally in the treatment of complex neurosurgical disorders is a well-informed patient. He admonished any neurosurgeon to always close a discussion with a patient and their family with the query, "Have I answered all your questions?"

What Dr. Rhoton truly meant to all of us in the field of skull base surgery, and medicine as a whole, defies prose. Dr. Jacques Morcos, current President of the North American Skull Base Society, has done a wonderful job expressing our sense of loss in his eulogy published in this issue. Additionally, Dr. Jon Robertson, a lifelong friend and colleague, adds his special perspective; Dr. Juan Carlos Fernandez-Miranda, a former Rhoton fellow, shares insight into what it was like to study and work with Dr. Rhoton; and Dr. Jeff Sorensen provides an account of the on-going effort to catalog and preserve Dr. Rhoton's incredible body of work for generations to come.